DOCUMENT RESUME

ED 032 609 24 CG 004 676

By-Ziller, Robert C.; And Others

Complexity of the Self Concept and Social Acceptance. A Technical Report.

Oregon Univ., Eugene. Center for Advanced Study of Educational Administration.
Spons Agency-Office of Education (DHEW), Washing D.C. Bureau of Research.
Bureau No-BR-5-0217
Pub Date 31 Jul 69
Contract-OEC-4-10-163
Note-38p.
Available from-Center for the Advanced Study of Educational Administration, University of Oregon, Eugene, Oregon 97403 (Mimeo -- $0.25 per Copy).
EDRS Price MF-$0.25 HC-$2.00
Descriptors-*Behavior Patterns, *Identification (Psychological), Peer Acceptance, *Perception, *Self Concept, Self Esteem, *Social Relations

Complexity of the self-concept was found to be associated with a self-report of identification with others, a topological measure of social interest, perception of persons older than the self as more similar to the self, and with greater popularity. It is concluded that the complexity of the self-concept is associated with acceptance of and by a wide variety of others. The initial framework is supported by the results. In terms of the self-concept, the control function associated with integration is assumed to be self-esteem. Self-esteem is linked to consistency of behavior across situations stemming from a supra-organization of the self-system. Thus, the dual self components in Lewin's theory of differentiation integration. The construct of complexity has been explored in isolation only as the first stage in the approach to the more general framework described in this study. (Author)

EDO 32609

BR-5-0217
Project 0001
PA-24
OE-BR

COMPLEXITY OF THE SELF CONCEPT AND SOCIAL ACCEPTANCE

Robert C. Ziller, Mary Dell Smith
University of Oregon
and
Edward Thompson
Connecticut College

A Technical Report
July 31, 1969

Bureau No. 5-0217, Project 0001
Planning for Change
Contract No. 4-10-163

Funding Authority: Cooperative Research Act

The research reported herein was conducted as part of the research and development program of the Center for the Advanced Study of Educational Administration, a national research and development center which is supported in part by funds from the United States Office of Education, Department of Health, Education and Welfare. The opinions expressed in this publication do not necessarily reflect the position or policy of the Office of Education and no official endorsement by the Office of Education should be inferred.

Center for the Advanced Study of Educational Administration
University of Oregon Eugene, Oregon

A considerable number of investigators (Lewin, 1935; Klein, 1951; Mayzner & Tresselt, 1955; Pettigrew, 1958; Rokeach, 1960; Zajonc, 1960; Harvey, Hunt, & Schroder, 1961) have been concerned with cognitive complexity as a variable which influences people's perceptions of persons and events. Although definitions of cognitive complexity vary somewhat, it is generally proposed that some persons tend to use few dimensions when perceiving stimuli or make only very gross discriminations among stimuli. Some writers had suggested that cognitive complexity-simplicity was a general trait which pervades all realms of cognitive functioning, but Vannoy's (1963) analysis of a battery of measures of complexity suggested that cognitive complexity may consist of a number of distinct and possibly independent factors.

In the approach described here, the analysis of the construct of complexity was circumscribed by focusing upon the complexity of the self concept rather than upon the complexity of objects, personal friends, or famous people, or complexity in general (see Allard & Carlson, 1963). It is proposed here that the primacy and ubiquity of the self concept renders it a crucial construct whose analysis in terms of complexity has implications for interpersonal perception.

It is usually proposed that in the development of the self concept,

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

the child begins by discriminating between the self and the not self. Since this primary differentiating cognitive process concerning self identity is one of the earliest and most enduring, it may also serve as a model for subsequent differentiating cognitive processes. The ubiquity of the self concept along with its primacy lends support to the significance of cognitive processes associated with the development of the self concept. Indeed, these same arguments may serve to support research concerning body image (Fisher, 1958).

Of course, the bifurcation of the universe into the categories of self and not self is but the first step in an infinite sequence. The self can be further differentiated, as can the not self, into an unlimited number of subparts. Lewin (1935) was one of the earliest personality theorists to recognize the process of differentiation or was concerned with the number of parts composing the whole.

More recently, Witkins, Dyk, Faterson, Goodenough, and Karp (1962) have made"differentiation" a focal concept in their investigation of personality. These authors, too, deal with the rudimentary differentiation of self and not self, but emphasize the body image in relation to the physical environment. For example, they summarized the developmental process as follows: "...experience ofthe body-field matrix is early essentially global, and during development becomes progressively more articulated in that body, self, and objects in general are experienced as segregated" (p. 14). Indications of differentiation include extent of definition of the self concept, articulateness of body image, and

method of impulse regulation. The latter, it should be noted, suggests that Witkin's work has its origins within ego psychology (see Hartman, 1958).

Finally, following the process of differentiation, Witkins is compelled to consider the subsequent process of integration. He proposes that psychological development moves toward increased differentiation but must also be accompanied by successively more complex reintegration of the system. It seems to be assumed here that increased differentiation without the subsequent control mechanism of integration would lead ultimately to personal disorganization. The integration described here is complex to the extent that the relationships among system components and between the system and its environment are elaborate. Necessarily, of course, complexity of integration of a system is determined in part by its level of differentiation. In Witkin's framework, the concepts of differentiation and integration are inextricably combined. It is impossible to abstract the concept of differentiation. In addition, he introduces the concept of complexity which tends to confound the construct further.

In an effort to untangle the constructs discussed here, Schroder, Driver, and Streufert (1967) have proposed three structural components, differentiation, discrimination, and integration. Differentiation is con eptualized as "the number of elementary dimensions or domains which are salient." A dimension is defined as a unique arrangement of stimuli. Differentiation can be measured in terms of the number of dimensional

units of information generated by a person when he perceives an array of stumuli.

Discrimination is seen as the "number of stimuli that can be judged or assimilated by a given dimension." According to Schroder et al, discrimination provides one dimension as a focus. A single dimension is differentiated.

The third structural component is integration which is seen as reflecting the ways in which the differentiated and discriminated dimensions can be interrelated in the generation of new and discrepant perspectives about stimuli. To summarize, in measuring abstractness or complexity of structure, three questions can be asked: (1) How many dimensions are at work in the structure (differentiation)? (2) How many parts has each of the differentiated dimensions (discrimination)? and (3) How complex are the schemata that relate the dimensions used in the cognitive structure?

Complexity of the self concept as used within the present framework evolves from aforementioned theoretical developments. In the terms used by Schroder et al, complexity of the self concept is most closely associated with discrimination since it is a direct measurement of the number of stimuli (adjectives) which can be assimilated by a dimension (the self concept).

In the present context, the term complexity is retained rather than discrimination because of the experimental basis of the construct.

In accounting for the judged complexity of shapes, Attneave (1957) used the "number of turns" as a measure of complexity. Glanzer and Clark (1963) extended the principle and found a high correlation between the number of words used to describe an array of figures and the complexity of the figures. Here, complexity of the self concept is measured by enumerating the number of adjectives checked as descriptive of the self.

The complexity of the self concept is defined by the number of facets of the self perceived by the individual. It has already been proposed that the earliest stage of self-awareness involves the separation of the self from not self. As the developmental process continues, the self concept becomes increasingly differentiated.

Following the first gross categorization of self and non-self, the infant begins to discriminate among other objects both social and material, and among his feelings and emotions. The relationship of the self to others, and particularly the parents, provides information about the self. As the child strives for independence from the parents, he learns to distinguish new aspects of the self. Group affiliations add further information about the self through comparisons and contrasts with the members and with other groups. By identifying with a group, the individual establishes that he is distinguished from those who are not in the group. The self is discovered by successive approximations in an external-internal direction. The not self is more readily discovered

than the self.

Inherent in the developmental process is the tendency to evaluate the self in comparison with others (see Festinger, 1954). Festinger's theory of social comparison is based on the assumption that a correct appraisal of one's own opinions and abilities in relation to those of others is presumed to derive from a more basic need for a clearly defined self concept (Ziller, 1964). Through the process of social comparison the individual establishes a frame of social reference with the self as a point of reference. In the process, the self is distinguished from others in terms of similarities and contrasts of opinions and abilities.

Expanding the theory of social comparison, it is now proposed that more meaningful encounters with a wide variety of others is associated with increased self dimensionality or complexity of the self concept. In order to establish similarities and contrasts with a wide variety of others and in the process of making these comparisons, a more highly differentiated self-social concept evolves. Each person with whom the self is compared presents one or more facets different from those of other persons. The perceiver tends to code these facets as being included in or excluded from the self definition. The inclusion of more facets within the self definition increases self complexity. Continuous confrontation with diverse others is assumed to encourage closer scrutiny of the self in terms of similarities and contrasts followed by the emergence of a more highly differentiated self concept. The result is a multifaceted self concept.

Thus it is proposed that the self concept may also be described in terms of complexity, the degree of differentiation of the self concept, or in Lewin's terms (1935) the number of parts composing the whole. As one aspect of cognitive style, complexity of the self concept reflects the number of dimensions along which stimuli relevant to the self are ordered (see Harvey, Hunt & Schroder, 1961). Assuming that facilitation of ordering and organizing stimuli is associated with attending to a wider range of stimuli, it is anticipated that individuals with complex self concepts may be aware of or consider a great number of stimuli as being potentially associated with the self. In terms of interpersonal perception, the complex person has a higher probability of matching some facet of the self with a facet of the other person, since there are a larger number of possible matches. Thus, it is hypothesized that the complex individual is more inclined toward assimilation of self and others or perceiving similarities between self and others, whereas the simplex individual is inclined toward contrasting self and others. In general, then, it is proposed that persons with more complex self concepts attend to a broader range of social stimuli, perceive more similarities between self and other, and are more responsive to others.

A cognitive style immediately associated with complexity of the self concept described here is dogmatism (Rokeach, 1960). Rokeach's extensive analysis of dogmatism includes descriptions of rigid categorization behavior, a levelling tendency in forming categories where details are overlooked and grossly dissimilar objects are categorized. These

information processing and coding behaviors devolve from control mechanisms which permit the dogmatic individual to maintain his belief-disbelief system intact. In this sense, then, the dogmatic person is closed to new information; his convictions are inviolable, thus permitting his cognitive structure to remain secure (Long & Ziller, 1965). For example, the dogmatic individual is less responsive to social stimuli.

Thus, it is now proposed that the degree of self-complexity is one facet of cognitive style and cognitive complexity. Here cognitive complexity is defined as a perceptual style which provides a set to employ many as opposed to few dimensions when ordering and evaluating stimuli, or to employ very fine as opposed to gross discriminations among dimensions or meaning (Vannoy, 1965). It is now suggested that complexity of the self concept and the development of cognitive complexity are associated.

It is also proposed that the individual with the more complex theory concerning self-social relations is less likely to be seriously disturbed by new experiences which momentarily appear to be incongruent with the system. This proposition derives by extrapolation from a series of unpublished experiments by Alex Bavelas of Stanford University concerning the etiology of superstition. He observed that persons with more complex hypotheses or

theoretical systems were able to assimilate new information into the system with greater facility.

Complexity of the self concept may be similar to a characteristic of self-actualization as described by Maslow (1954). The self actualized person is one whose basic physical needs, safety needs, esteem and love needs are satisfied and is free to explore the limits of his abilities in less self oriented actualized regions. The self actualized individual strives for self realization, self regulation, and moves away from control by external agents. Maslow suggests that in self-actualizing persons "many dichotomies, polarities, and conflicts are fused and resolved." In this manner self-actualized persons are simultaneously selfish and unselfish, individual and social, rational and irrational, and so on. Essentially Maslow is proposing that self-actualized persons are not simply described or categorized; that is, they are complex.

The Measure

As already indicated, complexity of the self concept is measured by the number of adjectives checked as descriptive of the self. In addition to the work by Attneave (1957) and Glanzer and Clark (1963) previously cited, the theoretical base of the measure derives from the Alex Bavela's unpublished studies from Stanford University concerning the etiology of superstition. In these studies it was found that there was a high correlation between the number of words used in theories generated by observers concerning a phenomenon and the rating of the

theory on a scale of complexity completed by independent judges.

One hundred-ten high frequency adjectives selected from the Thorndike-Lorge Word Book (1944) were presented in an adjective check list form. The subject is asked to check each adjective which he thinks describes himself. In a study involving 100 randomly selected students from grades 7 through 12, the split-half reliability (odd-even, corrected for length) was .92 (Long, Henderson, & Ziller, 1968). Test-retest reliability after one month for college sophomores was .72 (Ridgeway, 1965).

Validity

The initial explorations of the instrument included the correlation with intelligence and male-female differences. Intelligence scores from the California test of Mental Maturity were not found to be related to self complexity in a sample of 100 eighth grade students ($r = .09$, N.S.) Furthermore, in a study by Thompson (1965), academic performance in college was not found to be associated with self complexity. Thompson did find, however, that college females ($n = 179$) tend to have a more complex self concept than males ($n = 119$) ($M_1 = 30.1$, $M_2 = 36.4$, $t = 4.31$, $p < .005$).

Consistent with the earlier studies of the concept of complexity, the first validation effort was a correlation between the number of adjectives checked as descriptive of the self and independently administered direct self reports of their ratings on a five point complexity scale. The scale was introduced as follows: "The next component on

which you are asked to rate yourself is concerned with how complex a person you consider yourself to be. In evaluating this component, consider whether a written description of yourself would necessitate a long, complicated discourse, or whether, on the other hand, the task could be accomplished in a brief and simple manner. A complex person would probably be much more difficult to fit into a particular type or category, or group of categories, than a less complex person. In terms of complexity as described above, indicate how complex a person you consider yourself to be."

Five of the points on the scale were described ranging from "very simple" to "very complex." Both the measure of complexity of the self concept and the self report were imbedded within a number of other measures, thereby masking the link between the two. The subjects were 111 sophomores in an introductory psychology class at the University of Maryland. Those who checked more adjectives rated themselves higher on complexity ($r = .34$, $p < .01$, Ridgeway, 1965).

The second step in the validation program was to examine the association between the measure and other measures frequently included within the cognitive complexity-simplicity category. The referred measures included Rokeach's Dogmatism Scale (1960), Pettigrew's measure of category width (1958), and Kelley's Role Rep Test (1955). The only significant correlation was between the adjective check list and the Category Width Scale. The more adjectives checked the wider the category widths used in a judgment task ($r = 26$, $p < .05$). This supports a previous

finding reported by Mayzner and Tresselt (1955) in which category width was found to correlate significantly with self concept span. Self concept span was defined as the number of words checked about the self in the Gough Adjective Check List of 300 words.

The next step in the validation procedure was to relate complexity ofthe self concept to a standard broad spectrum or omnibus type personality inventory in order to examine its meaning within this extensive personality matrix. The California Psychological Inventory was chosen as the referent instrument. The subjects were again 111 college sophomores in an introductory psychology class who completed the forms during a class period. Five of the eighteen correlations were statistically significant. Dominance (.25), Communality (.25), Achievment vs. Independence (-.31), Psychological-Mindedness (-.23), and Flexibility (-.31).

In terms of Gough's (1957) description of the scales from the California Psychological Inventory, the complex individual is aggressive, confident, persistent, and planful (Dominance); dependable, moderate, tactful, reliable, patient, and sincere (Communality); inhibited, anxious, cautious, dissatisfied,and wary (low Achievement vs. Independence); apathetic, peaceful, serious, cautious, and unassuming (low psychological-mindedness); deliberate, cautious, worrying, industrious, and guarded (low flexibility). On the basis of Nichols and Schnell's analysis (1963) of the CPI, and the above correlations with complexity of the self concept, complexity may be assumed to be composed of two components: (a) self control and (b) person orientation. The first component has been found

to be related to behavior ratings indicating psychological stability, control, and good interpersonal relations. The second component has been described by Nichols and Schnell (1963) as a measure of the familiar Extraversion-Introversion dimensions as reflected in interpersonal interaction.

Complexity of the Self Concept and Information Search[2]

In the preceeding analysis, complexity was found to be associated with cautious behavior. It is possible to assume, in this connection, that the complex personality avoids premature closure or commitment to a given position. Coupled with the earlier finding that complex persons used wider category widths as well as a tendency to be less dogmatic (Thompson, 1965), the findings suggest that complexity of the self concept has some cognitive consequences. A direct test of this proposition was made by Smith (1969) by examing the information search and decision making behaviors of small groups composed of complex or simplex members. In general, it was proposed that complex groups delay a decision longer in an information search task and submit more complex decisions.

Delays in decision making are necessary for the development and reception of information. Thus, differences in the tendency to reserve judgment may be expected to relate to the decisions reached. If a person or group with a more complex cognitive structure is capable of producing a wider range of associations to particular stimuli, or a wider range of possible solutions to a problem, then a tendency may be exhibited to delay decisions, if possible, until enough information has been processed to decide among alternatives. Schroder, Driver, and Streufert (1967) characterize complex

information processors as seeking much more information before resolutions are made. This may be due, in part, to a higher level of initial uncertainty and lower rates of uncertainty reduction leading to a higher "commitment threshhold"; that is, they will require more information before a decision is reached (see Lanzetta, 1963). Indeed, Sieber and Lanzetta (1964) report that complex persons have a tendency to remain cognizant of ambiguity and are open to new information even after a decision has been reached.

With regard to complexity of decisions, Sieber and Lanzetta (1964) report that there is a greater tendency for abstract subjects to qualify their decisions. This was assumed to indicate a conflict involving other response alternatives. Similarly, Schroder, Driver, and Streufert (1967) in a study of the perception of simulated nations by abstract and concrete subjects found abstract individuals used more dimensions in distinguishing between nations than did simplex individuals.

An extreme groups design was used by Smith. In earlier uses of this design, Haythorn (1953) demonstrated that groups composed of individuals high on various attitudes, needs, and trails (authoritarian) display behaviors which are consistent with such member-personal properties. Moreover, a magnifying effect was proposed under homogeneous conditions. A similar design was used by Tuckman (1964).

The subjects were selected from the upper or lower 22% of a sample of 445 undergraduate females in an introductory laboratory course in psychology. The mean number of adjectives checked by the low group was 16.2 and

by the high group was 47.4.

The tasks used were similar to those developed by Potter (1966). The subjects are presented with 35 millemeter slides of familiar objects in a natural setting. Initially the slides are out of focus but then, step by step, focus is improved. Recognition consists of identifying the main subject of the picture. The slides included pictures of garden gloves, big-game trophies, a waterfall, a telephone, a wooden chair, portable stadium bleachers, a church, a jet airplane, a toilet, and a stuffed skunk. An additional picture of a fish acquarium was used as a trial figure to acquaint the subjects with the experimental procedures. These slides were chosen on the basis of the two pilot studies when it was found that they generated the greatest variety of responses, were not recognized when extrememly out of focus or very late in the focus sequence. The tasks appear to meet the requirements described by Schoder, Driver, and Streufert (1967) for examining differences in levels of information processing. They require a high degree of differentiation qs well as flexibility of integration or continuous readaptation among a number of dimensions.

The subjects were told that they would be shown a trial slide and eight test slides. Each slide was to be shown ten consecutive times, for a period each time of five seconds. The first showing was to be completely out of focus and the last showing completely in focus. The task was to decide as a group and as quickly as possible, the identity of the object they were viewing.

A competitive set was introduced in order to avoid the condition where every group would wait until the slide was sufficiently in focus and the solution was easily apparent. Thus, the instruction sheet given to the subjects was headed,"An Individual Task," and the instructions included the message that the "individual with the most points would win the game."

After each showing, the subjects were allowed ten seconds to record at least one or as many individual responses as they could produce. They were also required to indicate how confident they were as individuals in their recorded responses; one check if slightly sure, two checks if very sure. The subjects were told these would serve as "bonus points" and would be added to their score if correct and subtracted from their personal score if incorrect.

After the ten second individual recording time, the group members were provided unlimited time to reach a decision, if they wished. At least two members were required for a group decision. The group decision was worth 20 points and these points were to be divided, as the group chose, among the group members. If the decision was correct each individual received the number of points that the group had allotted her, and if the group decision was incorrect these same number of points were subtracted from each individual's score. If the group decided to report a decision after the showing, four kinds of information were given the recorder: (1) the decision made--naming the specific object, (2) how many ofthe twenty points was assigned to each member, and (3) group confidences in the decision according to the checks they used on the

individual reports.

Each slide was shown to the tenth level of focus regardless of the accuracy of the group decision. The order of presentation of the slides was randomized for each group.

The slide projector was adjusted manually at each level to premarked points on the focus adjuster. The amount of rotation of the lens necessary to bring a slide completely out of focus into complete focus was divided into ten equal intervals.

The subjects were seated as a group about six feet from the screen. The room was darkened, but minimal illumination was provided for writing.

The dependent measures were concerned with delay in group decision making and complexity of the group decisions. Delay in group decision making was presumed to be related to percent of incorrect decisions submitted, average level of focus of the slide when the group made the last "no decision" response, average lag between the introduction of the correct solution and the group acceptance of the solution, average discussion time per level of focus before the group reported whether or not they had made a decision, and discussion time after the group had achieved a correct group decision, and total discussion time.

Complexity of group decisions was assumed to be related to the following dependent measures: number of specific ideas; number of content descriptions; number of adjectives, details, and background information used in describing the group's decision; and total initiated statements for the group. The distinction between "content descriptions" and "ideas" is similar to one made by Potter (1966). "It is a cow," is a specific

idea. "It seems to be a very big object viewed from a great distance," is an example of a content description.

The results indicated that complex groups made a lower percentage of incorrect decisions (18.5% vs. 26.7 %, F = .68, N.S.); the"no decision" response was made later in the focus sequence by complex groups (6.3 vs. 5.4, F = 1.47, N.S.); complex groups had a greater lag between the introduction of the correct solution and the group decision (1.5 vs. 1.0, F = 4.51, P < .05); complex groups discussed the problem for a longer period of time before the correct group decision (45.8 vs. 28.8 seconds, F = 13.39, P < .005), and complex groups discussed the problem for a longer period of time after the correct group decision (31.5 vs. 15.6 seconds, F = 10.73, P < .005).

With regard to complexity of the response, complex groups submitted more ideas (103.8 vs. 92.8, F = 1.28, N.S.), submitted a greater number of content descriptions (110.2 vs. 38.7, F = 17.48, P < .001), included a larger number of elements in the correct decisions (23.3 vs. 13.6, F = 6.64, P < .025), and initiated a higher total number of statements (848.6 vs. 585.9, F = 9.69, P < .01).

The evidence suggests that complexity of the self concept is related to cognitive processes and behavior and may be assumed to be measuring discrimination, or the number of stimuli which can be assimulated by a dimension.

Social Acceptance

Complexity of the self concept has been associated with the discrimination of stimuli. When the stimuli are social in nature, complexity may reflect attention to social stimuli or social interest. The complex person is inclined to be person oriented and tends to compare and contrast the self and the other.

The association between complexity and social orientation is elongated. Intense social experiences with a wide variety of others which were not uniformly rewarding or unrewarding may make discrimination among persons and between self and others more salient. An emerging complex self concept may then be associated with the ability to match facets of the self with some facets of a wide variety of others and the perception of similarities between self and others. The perception of similarities between self and others is then associated with social acceptance (see Byrne, 1966). Finally, social acceptance of others is assumed to be associated with social acceptance by others.

In attempting to establish some of the major premises of this elongated framework, a series of studies were conducted which were designed to examine several links in the theoretical chain.

Study I

The first study in the series examined the relationship between scores of the complexity of the self concept and perceived social distance from

significant others.

On the basis of the earlier framework, it was proposed that persons with complex self concepts perceive themselves as closer to or included within a significant group of others. The subjects were 111 sophomores from an introductory psychology course at the University of Maryland (Ridgeway, 1965).

Two items were designed to measure social distance. The first was a simple self report; the second was a topological measure of self-other orientation (Ziller, Megas, & DeCencio, 1964). The following is the stem of the first item: "A trait known to psychologists as identification involves the extent to which you feel close to or feel you belong with another person or group of people. Thus, an individual who identifies with his family would be one who feels close to and sees himself as belonging to that group. By the same token, one who identifies with certain acquaintances, such as his teachers, would mentally group himself with his teachers. Some people identify with a wide range and variety of people, whereas others group themselves with no one else or with very few others. Indicate below the degree to which you identify with or feel close to others."

This description was followed by a 9 point scale ranging from "very few people and groups" to a "very large number of people and groups."

The second item which was designed to measure social distance is shown in Figure 1. The subject is required to

---

Insert Figure 1 about here

---

locate a circle representing himself somewhere in a rectangular field

in which three significant others are located, "parents," "teachers," "friends." Location of the self within the field of significant others (within the imaginary equilateral triangle formed by significant others) is assumed to be an indicator of social interest.

With regard to the latter item, previous research has shown that elementary school children locating the self within as opposed to without the societal triangle preferred more group versus individual activities (Long, Ziller, & Henderson, 1966); institutionalized behavior problem children depicted less social interest than a control group (Ziller, 1969); and Asian Indian adolescents (members of a relatively closed and cohesive extended families) in comparison with a sample of American adolescents matched for age showed higher social interest (Ziller, Long, Romana, & Reddy, 1967).

The Pearson correlation coefficient between complexity of the self concept and the self report of identification was .31, $P < .05$. The biserial correlation between complexity of the self concept and social interest was .11 which is not statistically significant although it is in the expected direction. Thus, the results appear to support the hypothesized association between complexity of the self concept and social interest or social distance. The results suggest that persons with complex self concepts perceive themselves within the field of forces of significant other people.

Study II

It was initially proposed that the complex person is oriented toward perceiving similarities between the self and others, whereas the simplex

individual tends to contrast self and others. This proposition is multiple in origin. Complexity of the self concept is presumed to evolve under conditions of social interaction with a wide variety of others leading to greater differentiation of the self by way of similarity and contrast processes. Subsequently the multi-faceted person tends to perceive more similarities between self and other than does the simplex individual. There exists a higher probability that the complex as opposed to the simplex person will match a facet of the self with a facet of the other, thereby contribuitng to the impression of similarity between self and other.

To test this hypotheses, Thompson administered the complexity instrument to 131 male college students ranging in age from 19 to 27. The 24 highest and 24 lowest scorers participated in the main phase of the study. No subject participated who was more than 21 years of age.

Individual subjects were informed that they were to work with a partner on a series of tasks. "In order to speed up the process of getting to know their work partner," the partner had completed a biographical inventory. The inventory consisted of 56 items. Each item was a question with a series of alternatives. One alternative was circled for each item. In addition the "partner" had written in his name, age, and sex.

The items were presented in a constant order with questions pertaining to physical appearance, person and family background, academic performance, religious activity, personal habits and activities, and attitudes.

The inventory in the two experimental conditions were identical with the exception of age: under one condition the "partner" was 20 and under

a second condition 39. The responses were pre-tested to examine their applicability to individuals of these two ages.

The subject was told to read the inventory and return it when completed. Each subject was timed while reading the inventory. Of course, the "partners" were constant "paper partners."

After reading the inventory, the subject was asked to make a series of judgements about his partner. A five item questionnaire designed to judge the degree of similarity between the subject and his partner was administered. Two of the items were derived from Bieri (1955) and concerned the probability that the subject and his partner would engage in similar activities.

The following items comprised the questionnaire: "Generally speaking, my partner and I are very much alike." "If my attitudes and beliefs were compared to my partner, they would be very similar." "If I filled out a biographical inventory, it would be very similar to my partner." "Of the several movies in town, my partner would be very likely to go to the same movie that I would." "My partner and I would most likely participate in the same activities if we belonged to the same club." The subject was requested to indicate his agreement or disagreement on a nine point scale ranging from "agree completely" to "disagree completely." The intercorrelations among the items ranged from .24 to .76. On the basis of these correlations, a total score was used.

A second measure of perceived similarity between self and other (or identification)was suggested by Ziller, Megas, and De Cencio (1964) which

in turn was derived from the work of Heider (1958) and Kuethe (1962). Heider proposed that grouping of similar objects is basic to organization and understanding. Kuethe has shown that objects with common properties are located closer to each other. Thus, objects with similar defining attributes tend to be grouped together. Conversely, it is now proposed that objects placed closer to each other is an indication of a judgment of similarity.

On this basis, the subjects were asked to draw two circles about the size of a five-cent coin and to label one with an "S" to represent the self and to label the second with a "P" for partner. A coin was made available for reference. The shortest distance between the circumferences of the circles was measured in centimeters. The correlation between the two measures of judged similarity was .30, $n = 48$, $p < .05$.

A 2 x 2 analysis of variance involving simplex-complex and partner's age (20 vs. 39) with regard to the similarity questionnaire items is shown in Table 1.

Insert Table 1 about here

The interaction effects were statistically significant ($F = 7.97$, $P < .01$). Simplex in comparison with complex persons perceived peers as more similar and older persons as less similar. Main effects were not statistically significant.

In the 2 x 2 analysis of variance with regard to the topological

measure of judged similarity there was again a tendency for the simplex as opposed to the complex to perceive peers as more similar, but the results were not statistically significant.

Insert Table 2 about here

The complex and simplex subjects were not found to differ with regard to the length of time required to read the biographical inventory.

The results suggest that complex as opposed to simplex persons differentiate peers more but seniors in age less. Proximal social stimuli are differentiated whereas distal stimuli are assimilated by persons with complex self concepts.

Study III[3]

The previous studies have shown that the individual's scores on the measure of complexity of the self concept are related to the perception of the self in relation to significant other people. The perception of the complex and simplex persons by other persons was examined in the present study through the use of sociometrics.

The personality determinants of individual popularity were reviewed by Mann (1959) who found that extraversion, adjustment, and conservatism were related. Little by way of explanation was proffered, however.

It was assumed here that popularity stems from a maximal probability for matching or accommodation of the characteristics of the self and other. The more popular or highly chosen individual, sociometrically, is capable of presenting a facet of the self acceptable to the widest variety of others. Thus, it is proposed that persons with complex as opposed to

simplex self concepts are more popular.

The subjects were 321 sixth grade students in 11 classrooms from 4 different school buildings. The subjects were all white. The composition of the classes remained unchanged throughout the school day.

All subjects completed a sociometric item asking them to name the five children with whom they would most like to play during recess. Those children who were not chosen by anyone were designated as the least popular. A number of popular or most highly chosen subjects equal to the number of unchosen were selected from each class. The resulting sample was reduced to 50 by random selection in order to match the socially desirable sixth graders by sex (17 boys and 8 girls). These 50 children were then administered the measure of complexity of the self concept by groups. The directions were read to the subjects.

The hypothesized association between complexity and social acceptance was supported by the results to an astonishing degree. The unchosen children check the least number of adjectives. The median for the unchosen children was 24; median for the popular children was 41. In fact, using a cutoff score of 31 adjectives, 49 out of the 50 subjects were categorized correctly as highly chosen or unchosen.

An analysis of the frequency with which adjectives with self depreciating associations were checked by the two groups of subjects was also explored. A list of ten negative self referrent adjectives was formed which included only those upon which the three experimenters were unanimously agreed. The difference in the frequency with which the negative

adjectives were checked by the more and the less popular children did not approach an acceptable level of statistical significance. Thus, the popular children tend to check more of the positive adjectives as descriptive of themselves. This would suggest that popular individuals simply have high self esteem as has previously been reported by Coopersmith (1967). Indeed, using a measure of self esteem developed by the senior author (Ziller, Hagey, Smith, & Long, 1969), Coopersmith's results were confirmed in the present study. The correlation between self esteem and complexity of the self concept has not been found to be statistically significant, however. Thus, the basic framework associating complexity of the self concept and social acceptance is supported by the results. Coupled with the results of the first and second studies, the results indicate the complex persons perceive others as more similar to themselves and are accepted more by others.

Overview

Complexity of the self concept was found to be associated with a self report of identification with others, a topological measure of social interest, perception of persons older than the self as more similar to the self, and with greater popularity. It is concluded that complexity of the self concept is associated with acceptance of and by a wide variety of others. The initial framework is supported by the results. A multifaceted self concept is assumed to maximize the probability of matching an aspect of self and other leading to the perception of similarity between self and others and acceptance between self and others.

In the initial framework, it was emphasized that cognitive processes are associated with complexity of the self concept because cognitive processes concerning the self are primary, continuous, and enduring. Thus, cognitive processes associated with the self tend to be generalized.

The cognitive process associated with complexity of the self concept is discrimination which is reflected in the number of stimuli which can be judged or assimilated by a given dimension. The discussion of the concept of discrimination without qualification in terms of the complimentary concept of integration is perhaps too simplex, however.

Integration is seen as the interrelationship of subparts and the generation of new perspectives emanating from the new groupings. Integration and discrimination (complexity here) are now seen as complementary components reminiscent of Lewin's constructs of differentiation and integration. Lewin (1935) described development as including an increase in the number of relatively independent subparts of the person (differentiation) and increasing the unity of the person (integration or organization).

Integration is not simply a reversal of the differentiation process. Through integration an interdependence among the different systems of the person emerges and a restructuring of the entire system occurs. In the subsequent course of differentiation, however, new centers of the personality are developed out of the new personality structure. The process is cyclical and results, usually, in ever increasing levels of development.

Nevertheless, the integration of the person during development is not a simple restructuring of the inner personal system. Instead it is a process by which a certain system (or subsystem) becomes dominant by imposing patterns of action related to certain needs. Integration, then, is described by Lewin as including a control function.

In terms of the self concept, the control function associated with integration is assumed to be self esteem (see Ziller, Hagey, Smith & Long, 1969). Self esteem is linked to consistency of behavior across stiuations stemming from an supra-organization of the self system. Thus the dual self components of complexity of the self concept and self esteem become the basic components in Lewin's theory of differentiation-integration. The construct of complexity has been explored in isolation only as the first stage in the approach to the more general framework described here.

Footnotes

[1]The research program from which this report emanated was supported in part by a grant to the senior author by the National Science Foundation and in part by the United States Office of Education through a contract to the Center for the Advanced Study of Educational Administration, University of Oregon.

[2]This section of the report summarizes an unpublished Master's thesis by Mary Dell Smith, University of Oregon, 1969, "Complexity of the Self Concept and Information Search and Decision-Making in Homogeneous Groups."

[3]This section of the report summarizes an unpublished study by Ziller, R.C., Alexander, Maria, and Long, Barbara H., University of Oregon, "Self-Social Constructs and Social Desirability."

References

Allard, M. & Carlson, E.R. The generality of cognitive complexity. J. of Soc. Psychol., 1963, 59, 73-75.

Attneave, F. Physical determinants of the judged complexity of shapes. J. of exp. psychol., 1957, 53, 221-227.

Bieri, J. Cognitive complexity-simplicity and predictive behavior. J. Soc. Psychol., 1955, 51, 263-268.

Byrne, D. An introduction to personality. Englewood Cliffs, New Jersey: Prentice-Hall, 1966.

Coopersmith, S. The antecendents of self-esteem. San Francisco: Freeman, 1967.

Festinger, L. A theory of social comparison processes. Human Relations, 1954, 7, 177-140.

Fisher, S. Body image and personality. Princeton, New Jersey: Van Nostrand, 1958.

Glanzer, M. & Clark, W.H. Accuracy of perceptual recall: An analysis of organization. Verbal Learning and Verbal Behavior. 1963, 1, 289-299.

Golding, Lynn H. & Ziller, R.C. Social-Psychological Implications of Discreditable Stigmata. Unpublished Manuscript, University of Oregon, 1968.

Gough, H.G. The California Psychological Inventory. Consult. Psychol. Press, Palo Alto, California, 1957.

Hartman, H. Ego psychology and the problem of adaptation. New York: International Universities Press, 1958.

Harvey, O.J., Hunt, D.E., & Schroder, H.M. Conceptual systems and personality organization. New York: Wiley Press, 1961.

Haythorn, W. The influence of individual members on the characteristics of small groups. J. of Abnorm. Soc. Psychol., 1953, 48, 276-284.

Heider, F. The psychology of interpersonal relations. New York: Wiley, 1958.

Kelly, G.A. The psychology of personal constructs. New York: Norton, 1955.

Klein, G.S. The personal world through perception. In R.R. Blake & G.V. Ramsey, (Eds.), Perception: an approach to personality. New York: Ronald Press, 1951.

Kuethe, J.L. Social schemas. J. Abnor. Soc. Psychol., 1962, 64, 31-36.

Lanzetta, J.T. Information acquisition in decision making. In O.J. Harvey (Ed.), Meetings and social interaction: cognitive determinants. New York: Ronald Press, 1963.

Lewin, K. A dynamic theory of personality. New York: McGraw, 1935.

Long, Barbara H., Henderson, E. & Ziller, R.C. Developmental changes in the self-concept of adolescents. School Review, 1968, 76, 210-230.

Long, Barbara H. & Ziller, R.C.. Dogmatism and predecisional information search. J. Appl. Psychol., 1965, 49, 376-378.

Long, Barbara H., Ziller, R.C., & Henderson, E. A study of individualism: Deomgraphic and psychological correlates. Social Forces, 1966, 45, 96-106.

Mann, R.D. A review of the relationship between personality and performance in small groups. Psych. Bulle., 1959, 56, 241-270.

Maslow, A.M. Motivation and personality. New York: Harper, 1954.

Mayzner, M., Tresselt, M.E. Concept span as a composite function of personal values, anxiety, and rigidity. J. of Pers., 1955, 24, 20-33.

Nichols, R.C. & Schnell, R.R. Factor scales for the California Personality Inventory. J. of Consult. Psychol., 1963, 27, 228-235.

Pettigrew, T.F. The measurement and correlates of category width as a cognitive variable. J. of Pers., 1958, 26, 532-544.

Potter, Mary D. On perceptual recognition. In J.S. Bruner (Ed.), Studies in cognitive growth. New York: Wiley, 1966.

Ridgeway, Sarah. Relationships among three measures of self concept. Unpublished Masters Thesis. University of Maryland, 1965.

Rokeach, M. The open and closed mind. New York: Basic Books, 1960.

Sieber, J.E. & Lanzetta, J.T. Conflict and conceptual structure as determinants as decision making behavior. J. of Pers., 1964, 32, 622-641.

Schroder, H.M., Driver, M.J., & Streufert, H. Human information processing. Holt, Rinehart & Winston, 1967.

Smith, Mary Dell. Complexity of the Self Concept and Information Search and Decision-Making in Homogeneous Groups. Unpublished Master's Thesis, University of Oregon, 1969.

Thompson, E.H. Complexity of the Self Concept; Contrast and Assimilation Effects in Perception & Acceptance of Strangers. Unpublished Doctoral Dissertation, University of Delaware, 1966.

Thorndike, E.L. Large I. Teacher's word book of 30,000 words. New York: Bureau of Publications. Teachers College, Columbia University, 1944.

Tuckman, B.W. Personality structure group composition and group functioning. Sociometry, 1964, 27, 469-487.

Vannoy, J.S. Generality of cognitive complexity-simplicity as a personality construct. J. of Pers. of Soc. Psychol., 1965, 2, 385-396.

Witkin, H.A., Dyk, R.B., Faterson, H.F., Goodenough, D.R., & Karp, S.A. Psychological differentiation. New York: John Wiley, 1962.

Zajonc, R.B. The process of cognitive tuning in communication. J. of Abnorm. Soc. Psychol., 1960, 61, 159-167.

Ziller, R.C. Individuation and socialization. Human Relations, 1964, 17, 341-360.

Ziller, R.C. The alienation syndrome: A triadic pattern of self-other orientation. Sociometry,(in press.)

Ziller, R.C., Hagey, Joan, Smith, Mary Dell, & Long, Barbara H. Self-esteem: A self-social construct. J. Consult. and Clinical Psychol., 1969, 33, 84-95.

Ziller, R.C., Megas, J., & DeCencio, D. Self-social constructs of normals and acute neuropsychiatric patients. J. Consult. Psychol., 1964, 28, 50-63.

Table 1

Means and Analyses of Variance of Judged Similarity in Relation to Simplex-Complex Perceivers and Stimulus Persons Age 20 and 39

Perceiver	Age of Partner	
	20	39
Simplex	3.62[a]	5.28
Complex	4.25	3.82

Main effects

Complexity	F = 1.25, n.s.
Age of Partner	F = 2.75, n.s.
Interaction	F = 7.97 $p < .01$

[a]A low score indicates high judged similarity

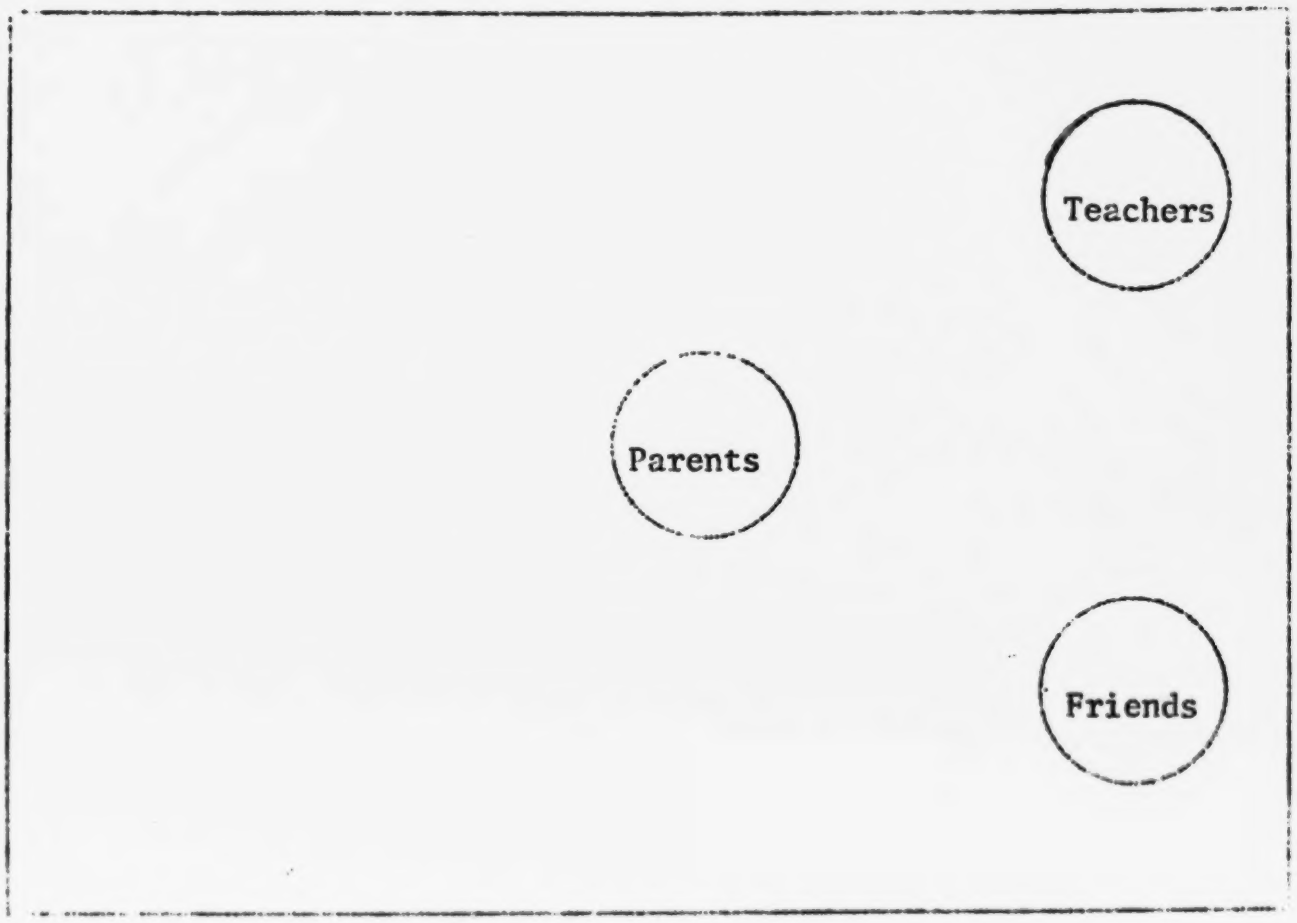
Table 2

Mean Values of the Topological Measure of Judged Similarity in Relation to Simplex-Complex Perceivers and Stimulus Persons Age 20 and 39

	Age of Partner	
	20	39
Simplex	4.61[a]	6.54
Complex	5.72	6.74

[a]Distance in centimeters

The results are not statistically significant.



Directions: The circles stand for your Parents, Teachers, and Friends. Draw a circle to stand for yourself any where in the given space.

Figure 1: Example of an item designed to measure social interest.